eGovernment and web services: the eENVplus approach opening new operational solutions

The Portugal pilot example (DGT)

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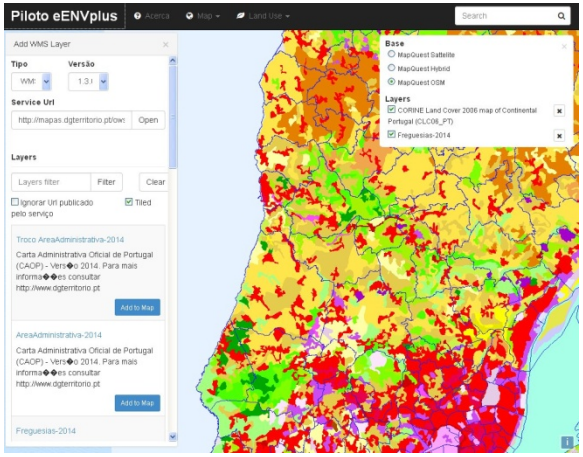
Main goals of Portuguese pilot:

- Create an application to monitor land cover changes over time
- Develop a prototype integrating web services to build indicators and monitor urban dynamics
- Evaluate fitness for purpose of available datasets to deal with urban evolution

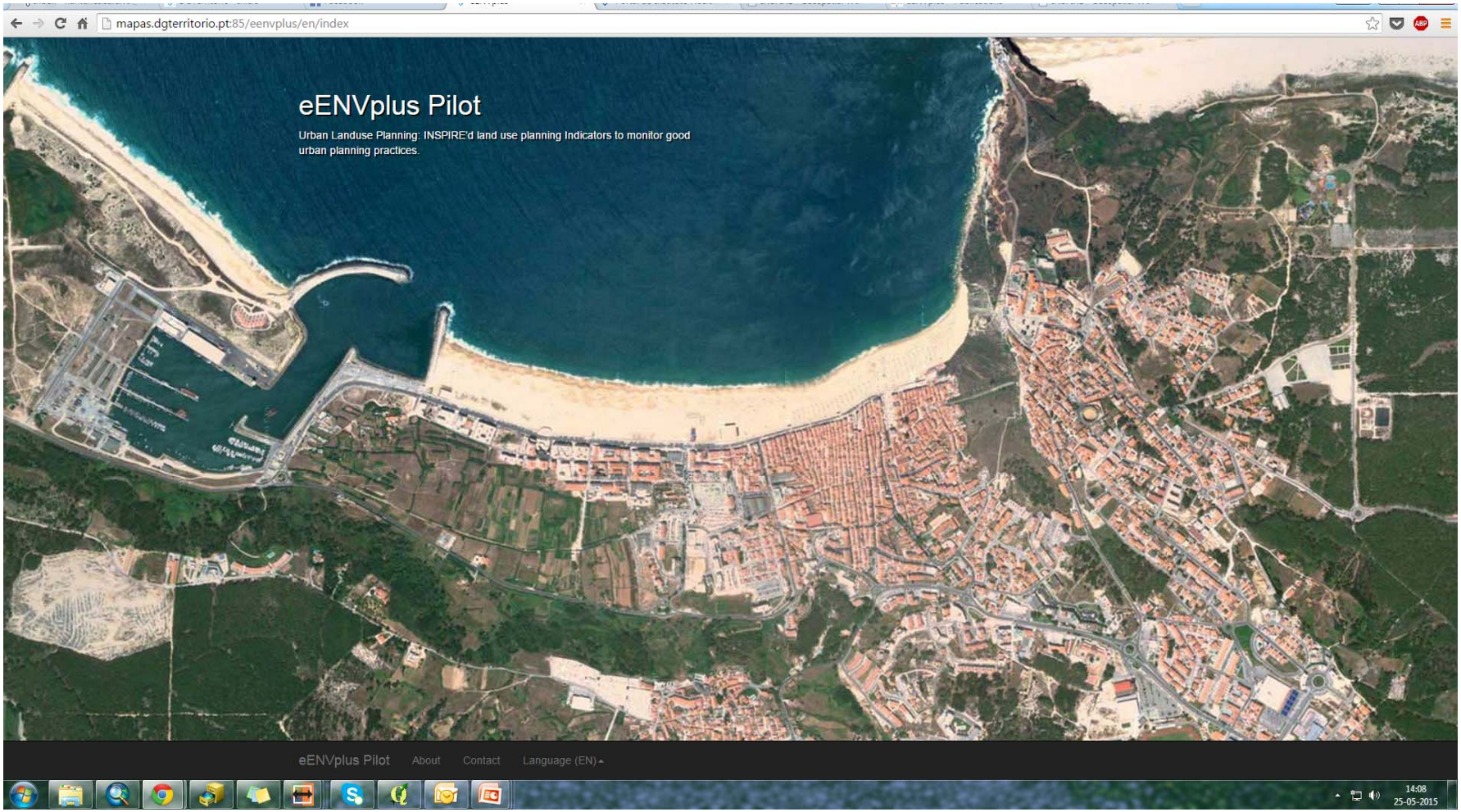


What we made within the project

- Data harmonization (COS, CRUS, Administrative units) and validation
- Creation and validation of Metadata
- Make the ETS for all the data: COS, CLC, CRUS and CAOP, INSPIRE COMPLIANT, included in the project
- Creation of indicators to monitor urban dynamics
- Geoportal (WFS, WMS and WPS)
- Training session to test the geoportal (New University of Lisbon)

http://mapas.dgterritorio.pt:85/eenvplus/en/index

Cover page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eENVplus Pilot
Urban Landuse Planning: INSPIRE'd land use planning Indicators to monitor good urban planning practices.
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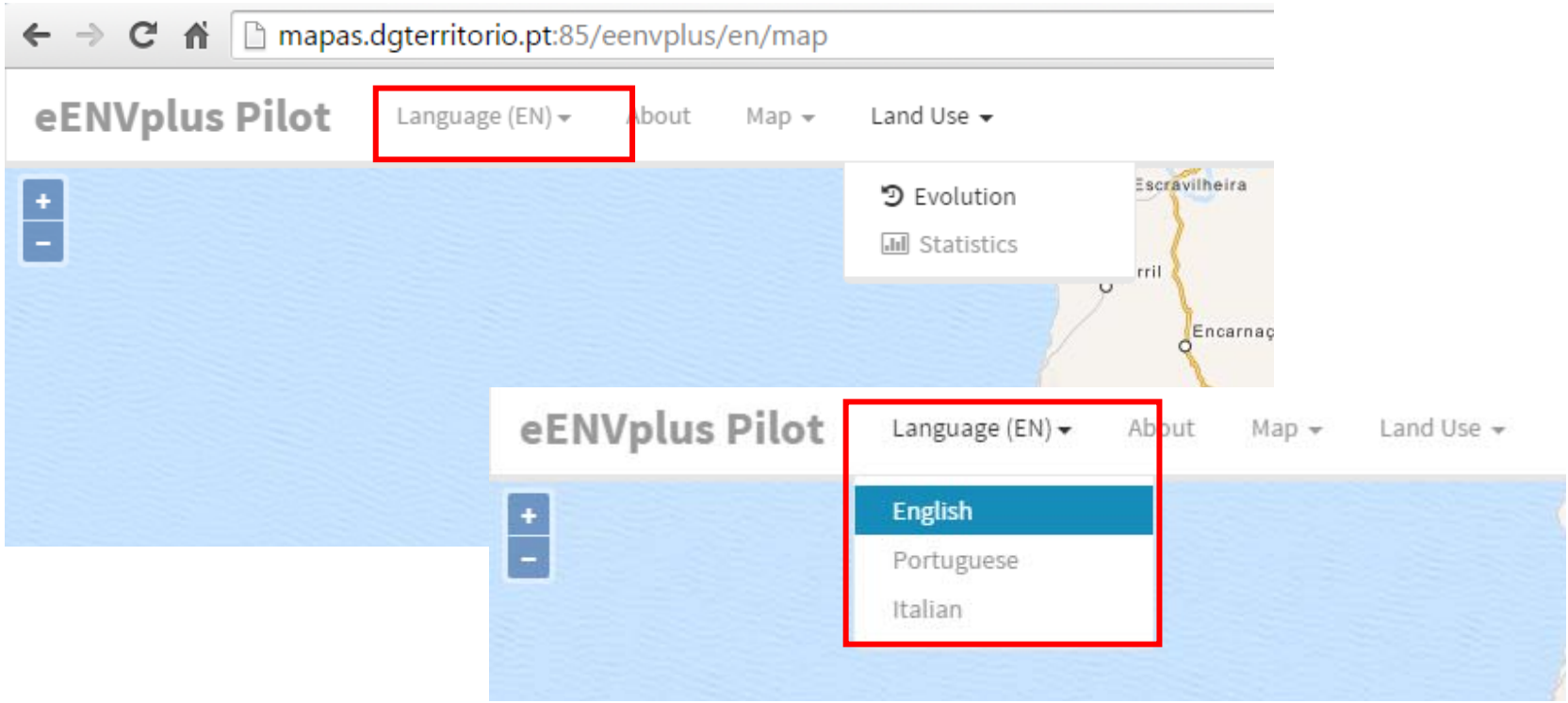
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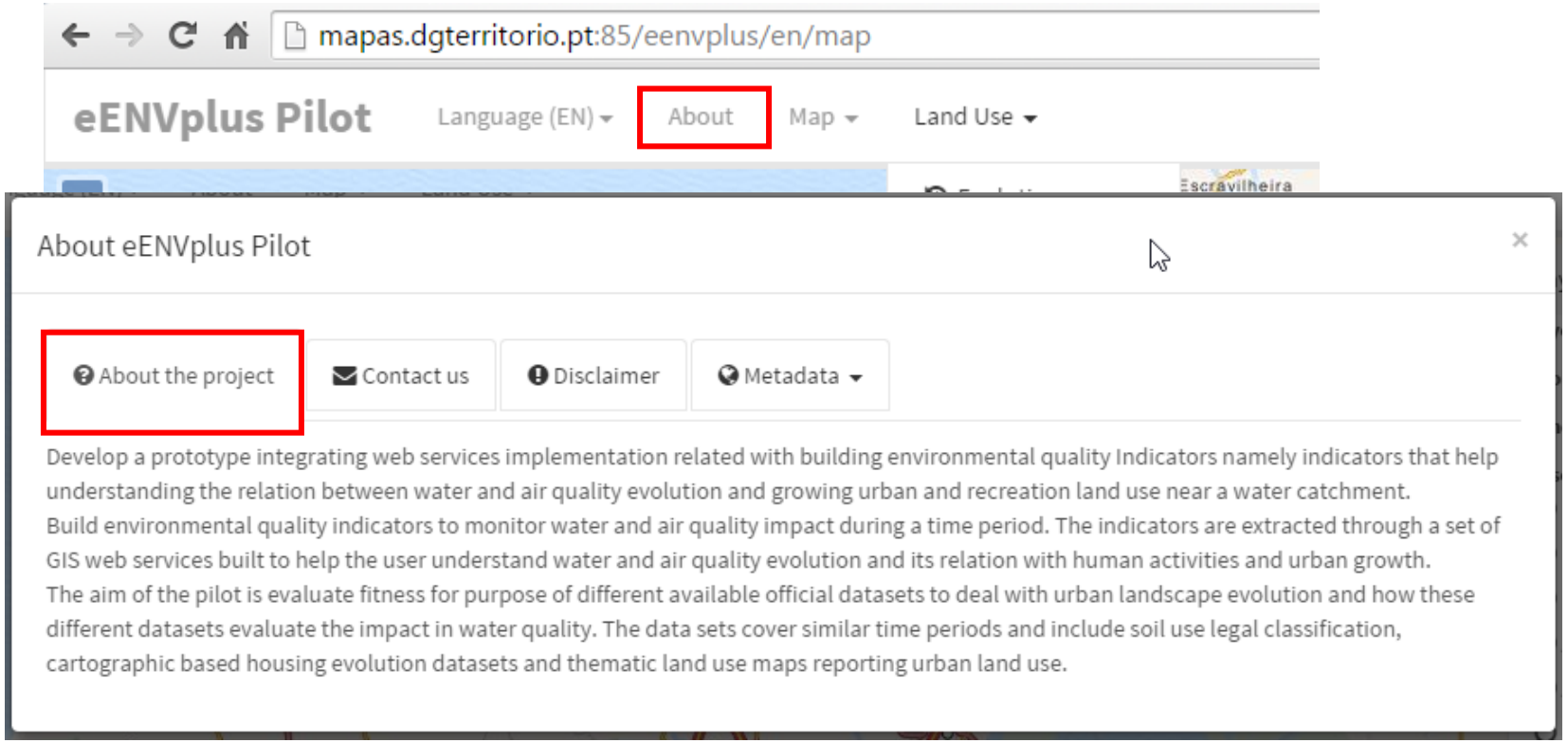
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Metadata
Develop a prototype integrating web services implementation related with building environmental quality Indicators namely indicators that help understanding the relation between water and air quality evolution and growing urban and recreation land use near a water catchment.
Build environmental quality indicators to monitor water and air quality impact during a time period. The indicators are extracted through a set of GIS web services built to help the user understand water and air quality evolution and its relation with human activities and urban growth.
The aim of the pilot is evaluate fitness for purpose of different available official datasets to deal with urban landscape evolution and how these different datasets evaluate the impact in water quality. The data sets cover similar time periods and include soil use legal classification, cartographic based housing evolution datasets and thematic land use maps reporting urban land use.

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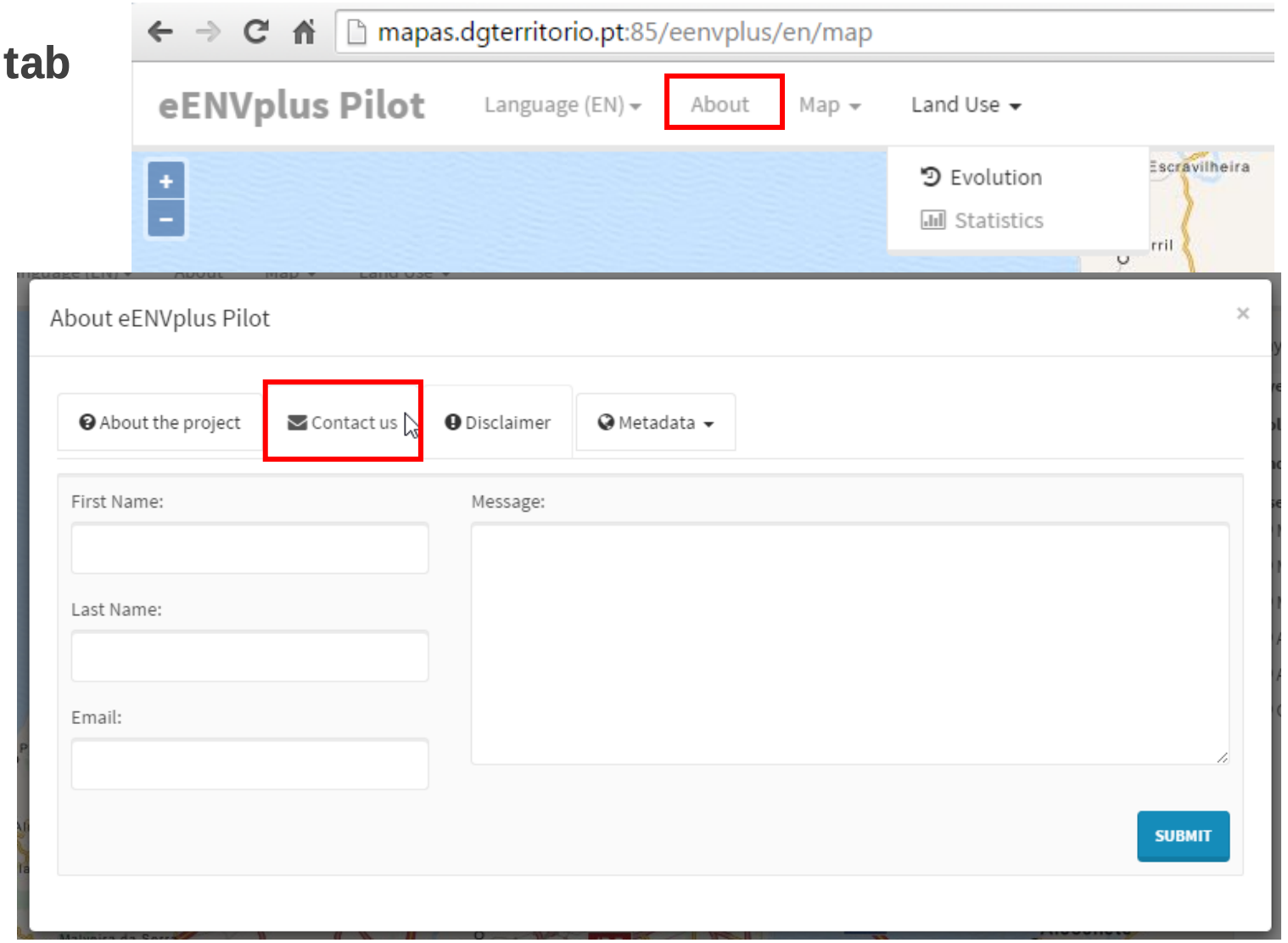
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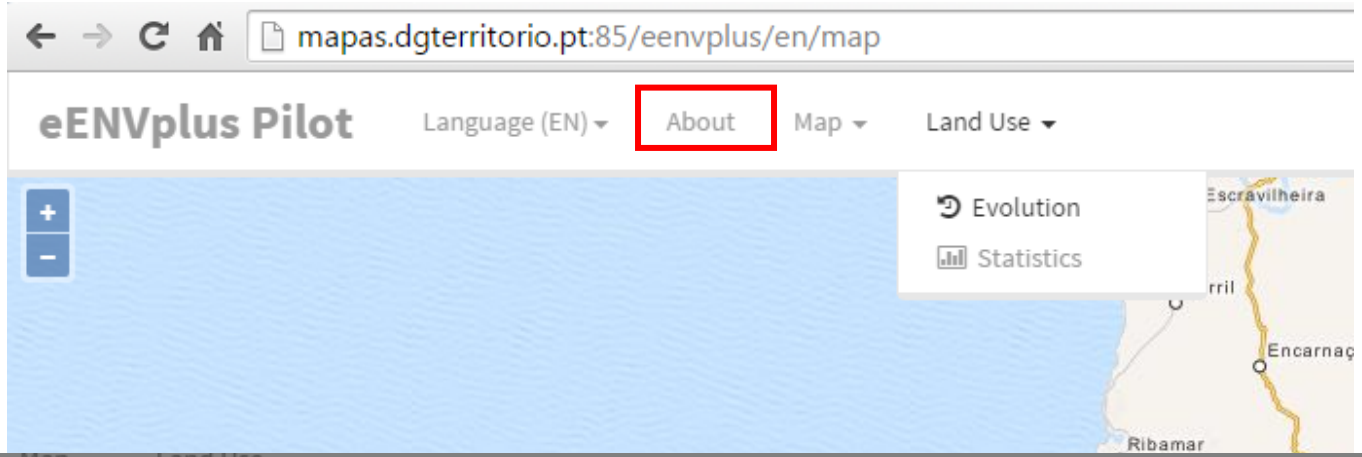
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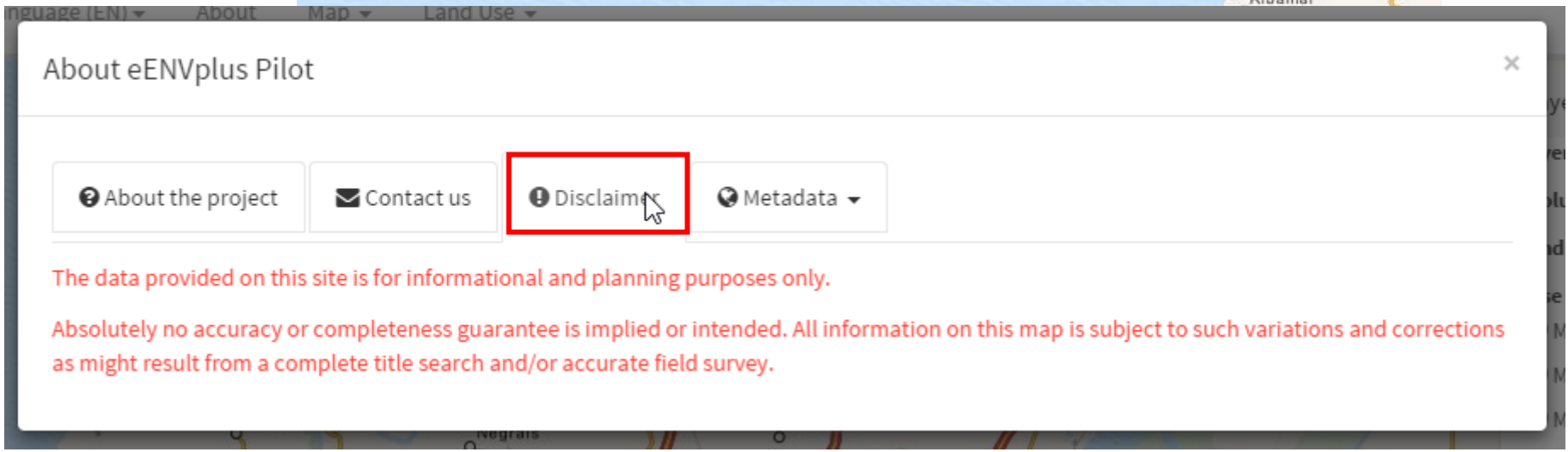
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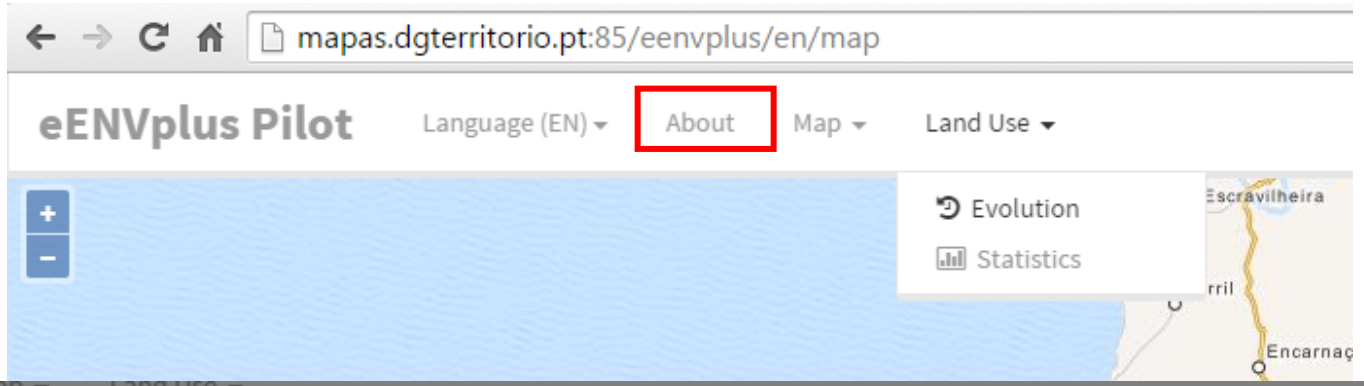
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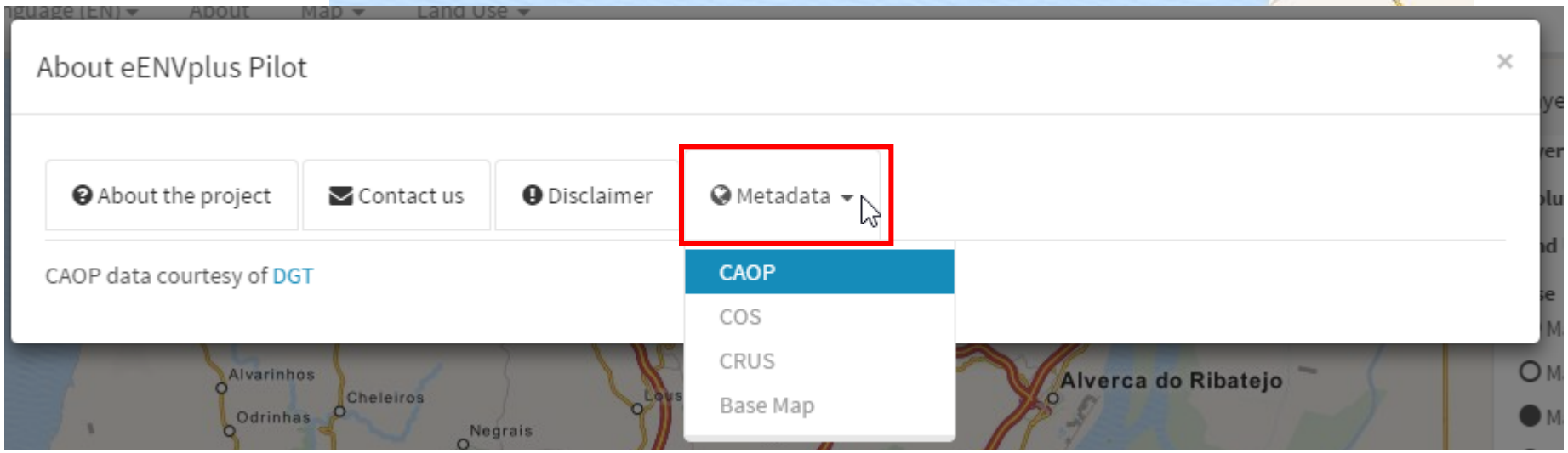
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CAOP data courtesy of DGT
CAOP
COS
CRUS
Base Map
Alvarinhos
Odrinhas
Cheleiros
Negrais
Alverca do Ribatejo

Map tab

The themes that are added to the viewer come from OGC WMS services.

These themes can be add dynamically, based on user-specified service link

Map tab

- Based on the WMS url the user specified, the application contacts the service, retrieves and displays its features/capabilities (GetCapabilities).

- The application can identify the existence of Inspire Extended WMS Capabilities, presenting the user with a button (Show Metadata Service) that provides the access to service metadata.

- The user can individually add each layer provided by the service map. Once the user add the layer to the map, can control the visibility, transparency and see the legend.

- It can also inquire and get information about the features drawn on the map (GetFeatureInfo).

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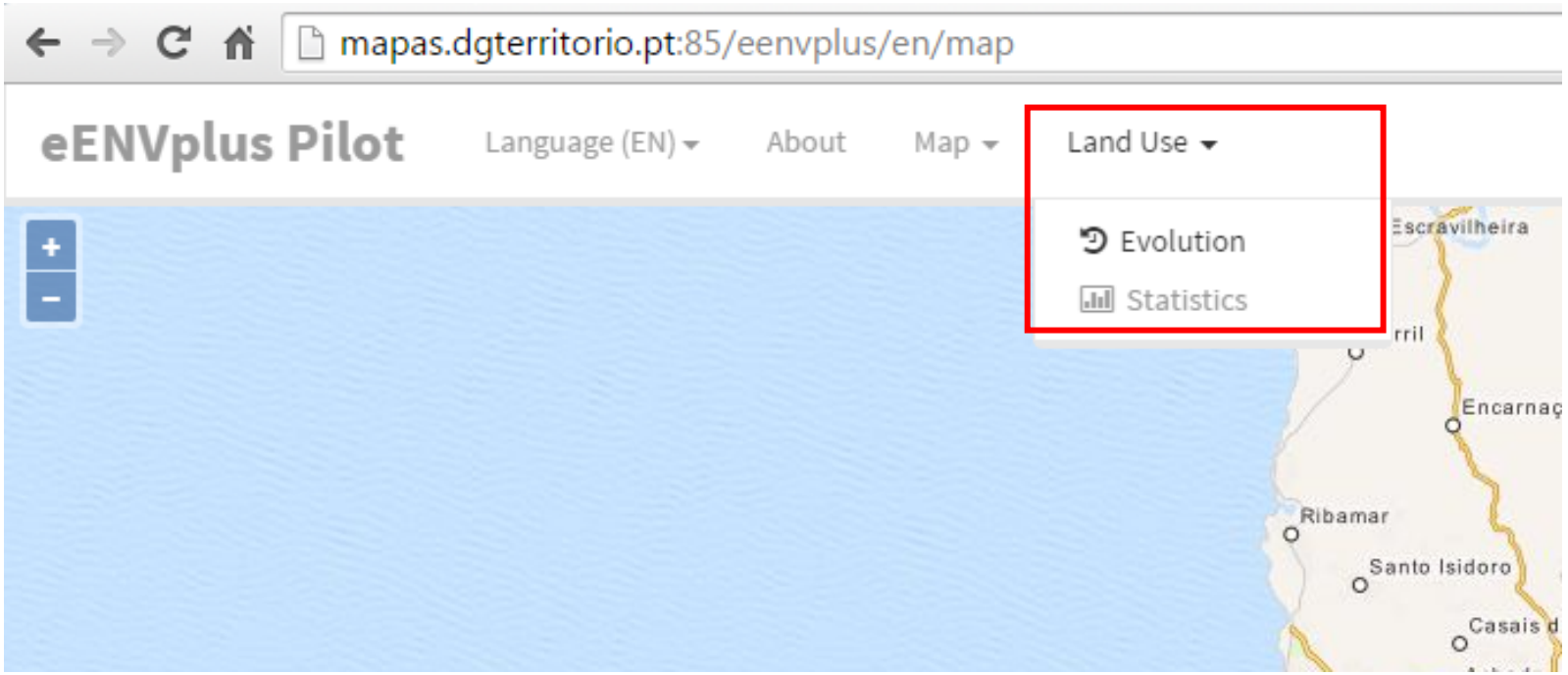
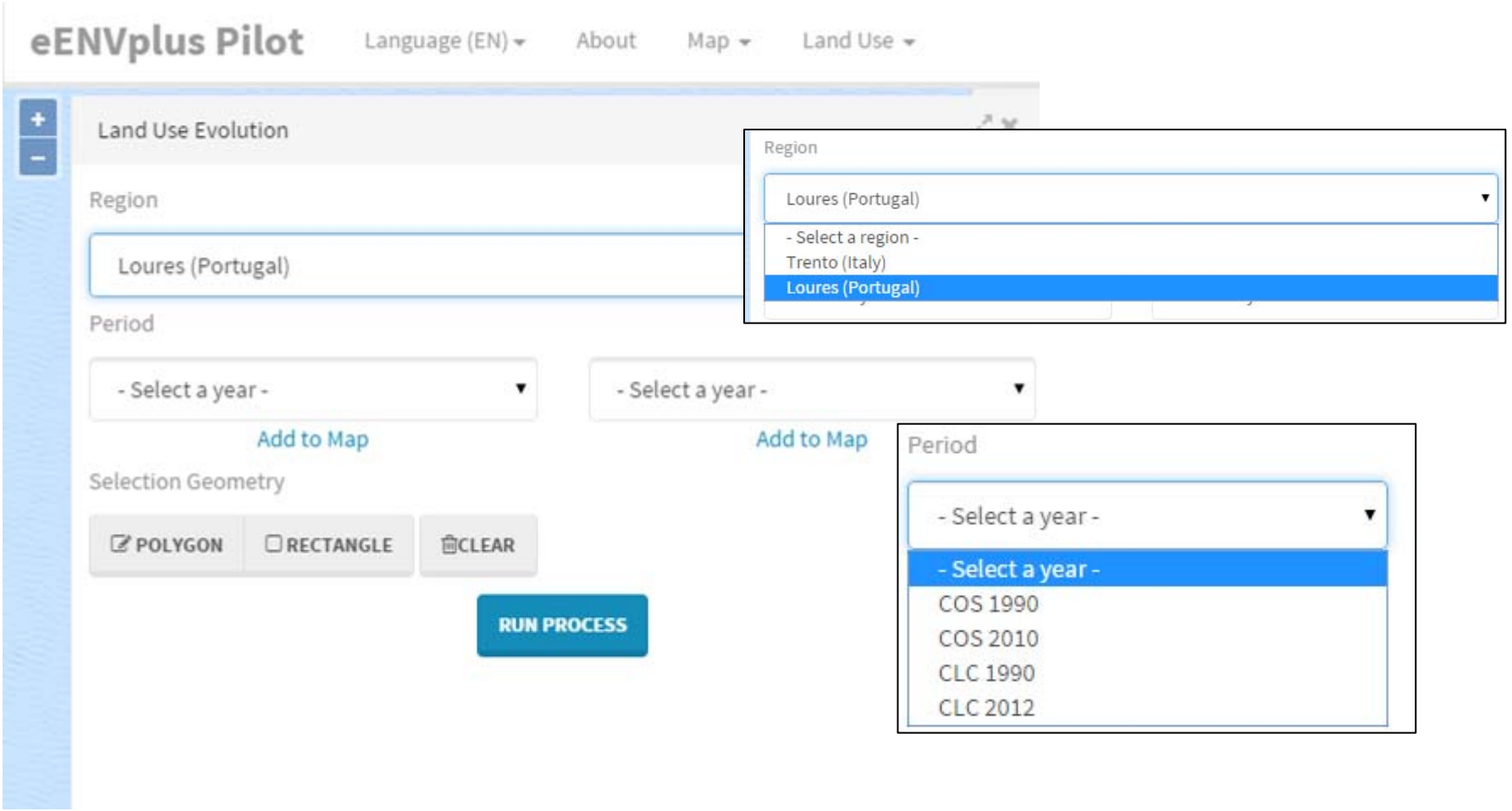


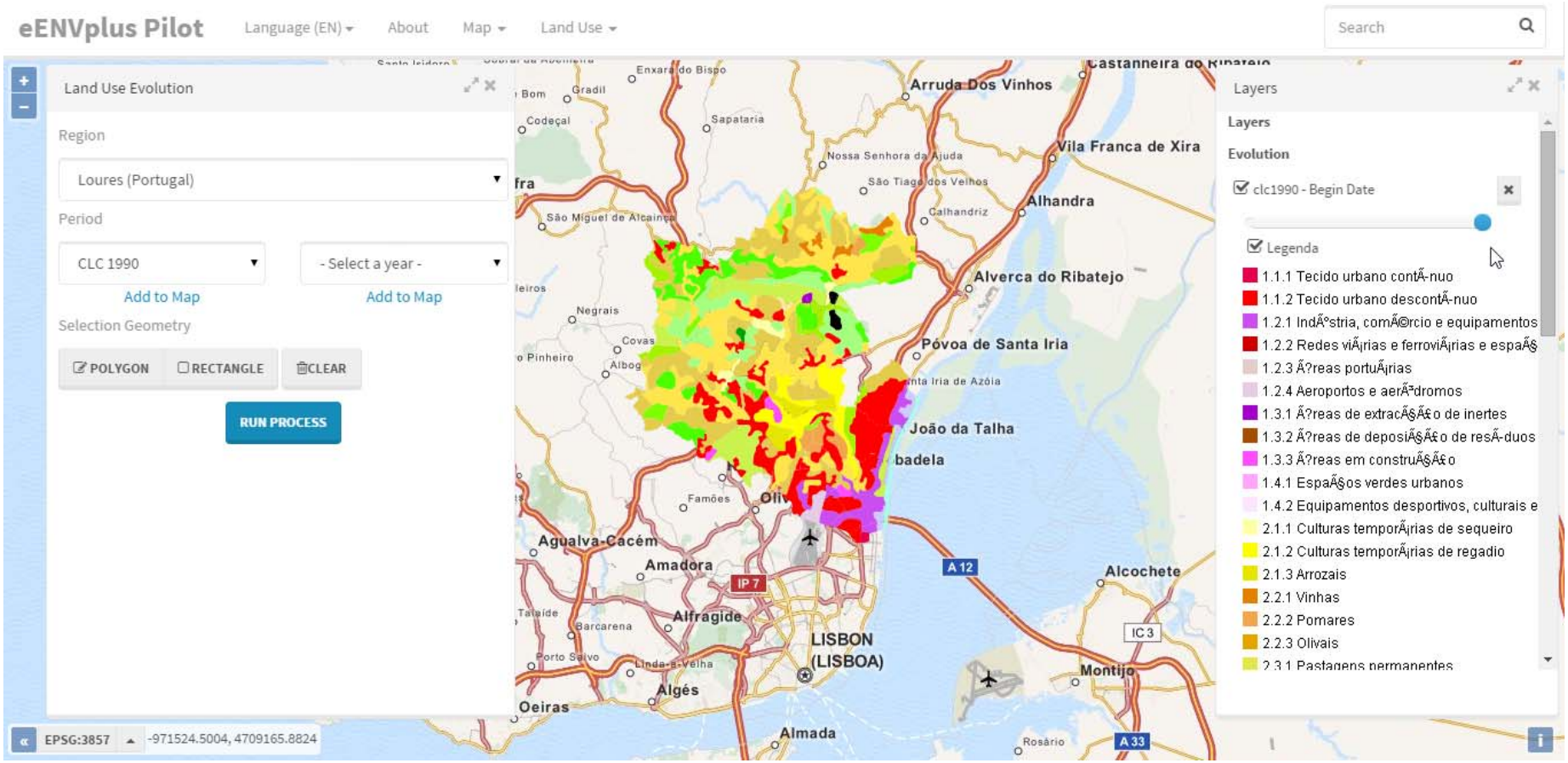
The application implements two sets of features:

1. Analysis of the evolution of land use/land cover
2. View of indicators to monitor urban dynamics

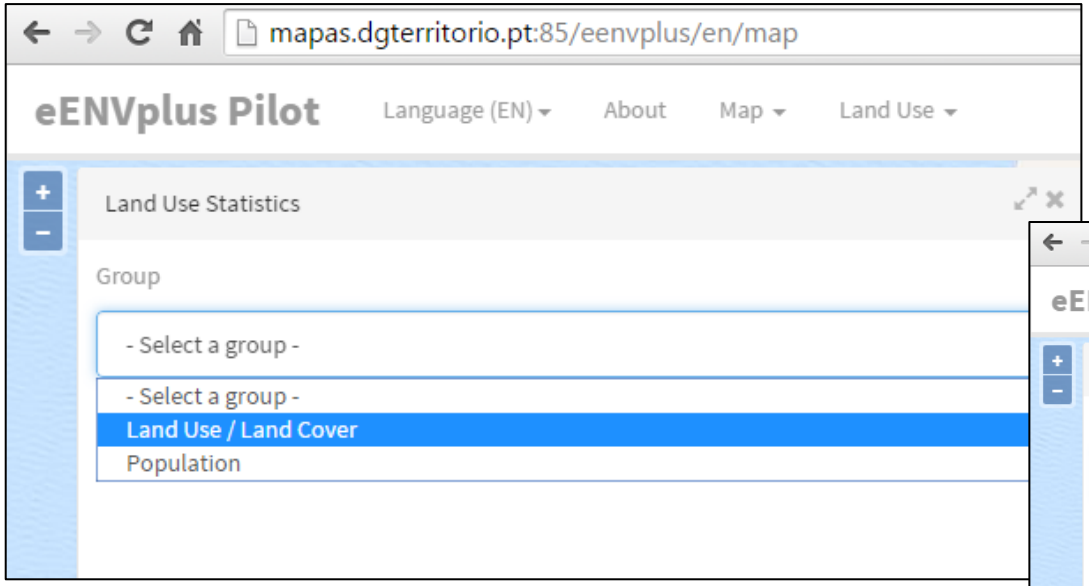
Land use | evolution

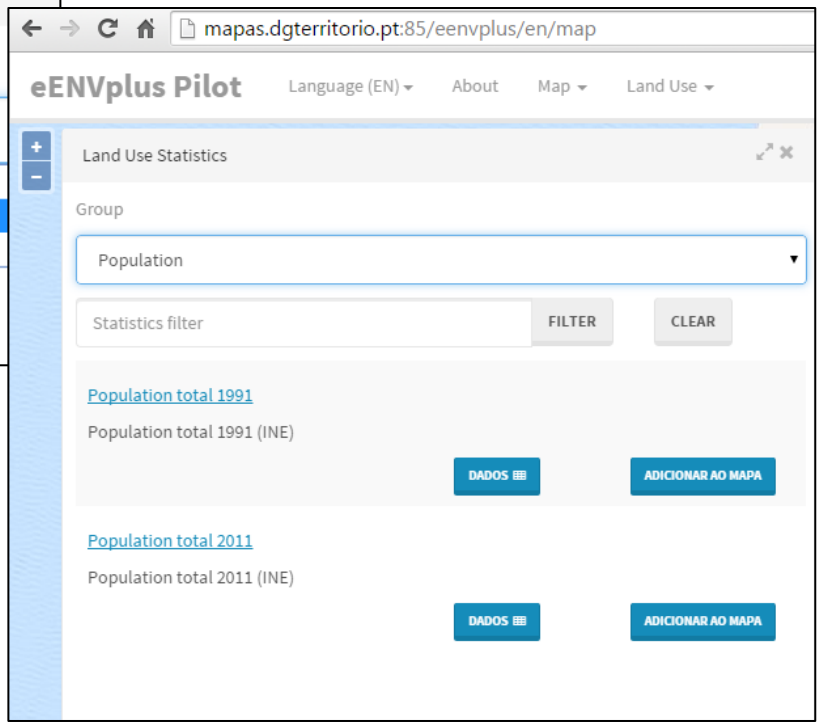


Corine Land Cover Map 1990



Statistics tab | population group





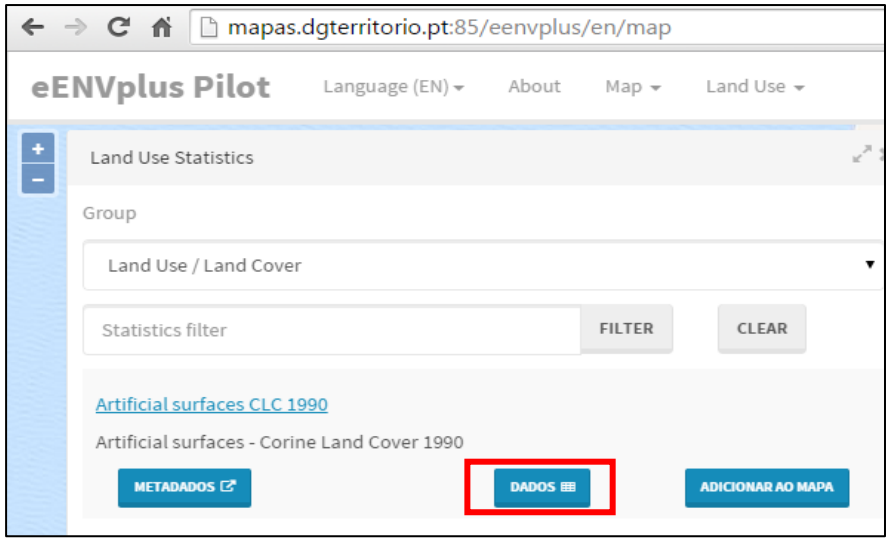
The indicators are available through WMS and WFS (view and download services)

Statistics tab | Land use / land cover group

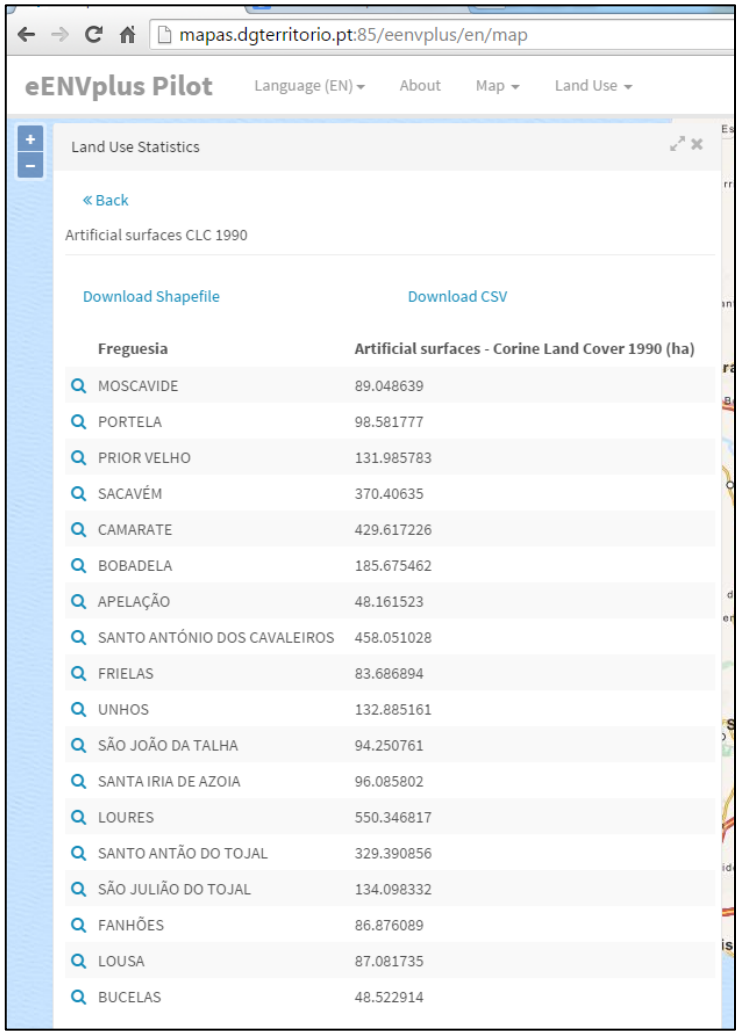
Statistics tab | Land use / land cover group

Apply a filter

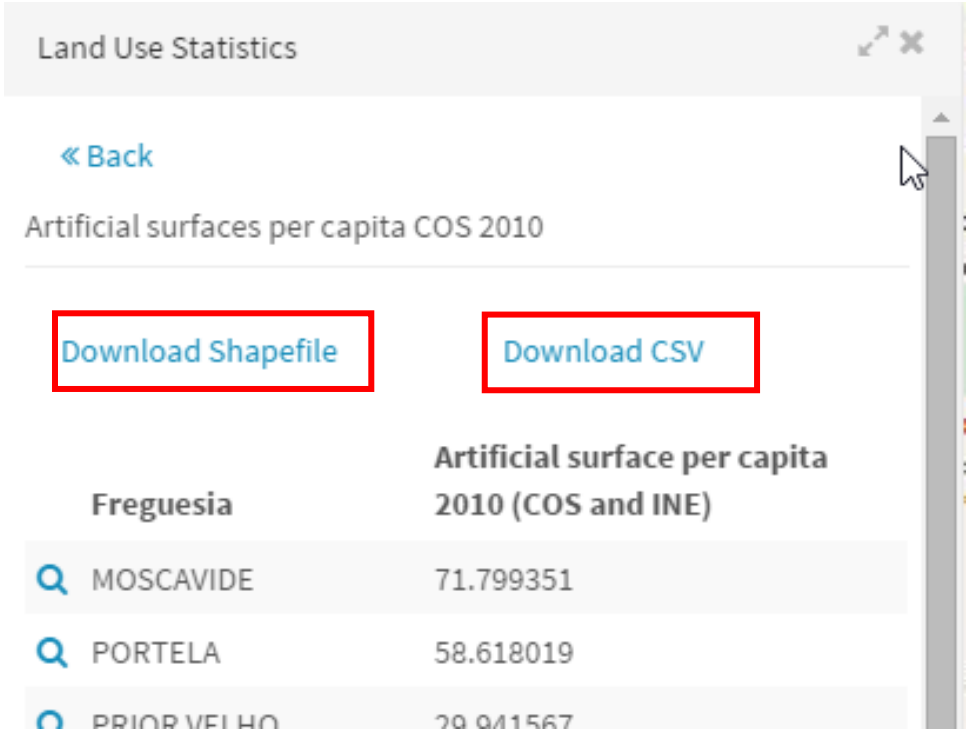
Statistics tab | Land use/land cover group



The “Data” option returns the value of the selected indicator to each municipality

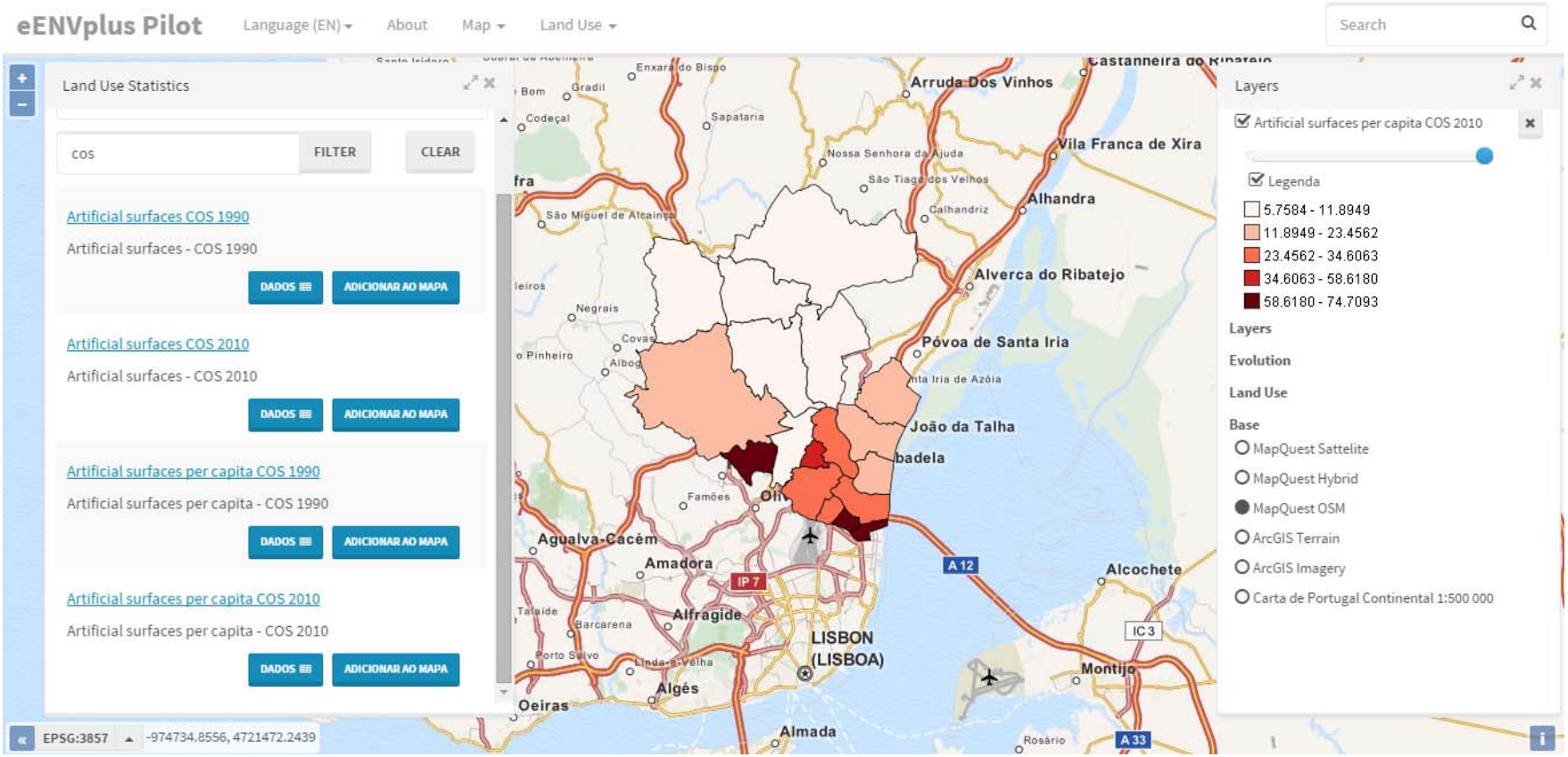


Statistics tab | Land use / land cover group



Download services

Artificial surfaces per capita (source: DGT and INE)



Next steps:

1. Metadata availability

2. Web processing availability

3.Building more dynamic territorial indicators to monitor and support land use planning activities.

Thank you!

DGT team of eENVplus project

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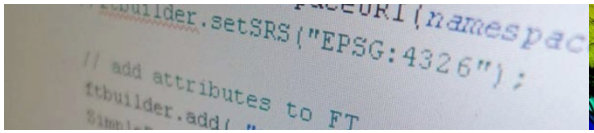
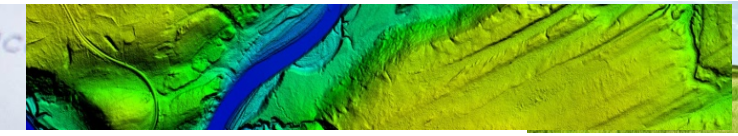
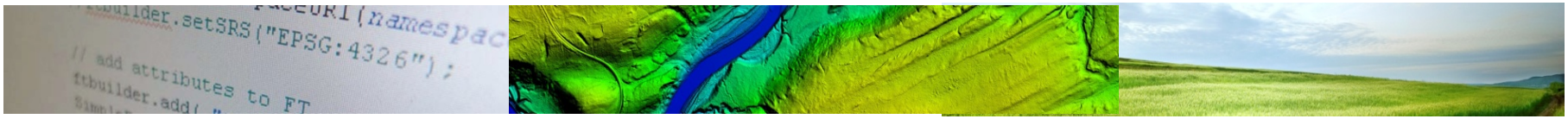




Thank you!

Special thanks to:

Ricardo Sena

Rui Andrade, Waymotion